

REMARKS

By this amendment, the specification, Figures 4 and 5 and claims 1, 5 and 14 have been amended, claims 4 and 6 have been cancelled without prejudice or disclaimer, and claims 15-26 have been added. The specification has been amended to correct certain informalities.

Applicant respectfully submits that the above amendments do not add new matter to the application and are fully supported by the original specification and/or Korean Patent Application .

In view of the above amendments and the following Remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Rejection Under 35 U.S.C. §112, second paragraph

Claim 14 stands rejected under 35 U.S.C. §112, second paragraph as being indefinite. Applicant respectfully traverses this rejection for at least the following reasons.

Claim 14 and page 4 of the specification has been amended to recite $0.5\mu s$ to about $5\mu s$ to overcome the rejection to the claim. This amendment is made for the sole purpose of clarifying claim 14. Applicant submits that support for the amendment to claim 14 can at least be found in Applicant's original Figure 4. This amendment is not made for the purpose of avoiding prior art or narrowing the claimed invention, and no change in claim scope is intended. Therefore, Applicant does not intend to relinquish any subject matter by this amendment. Applicant respectfully submits that claim 14, as amended, fully complies with the requirements of 35 U.S.C. §112, second paragraph.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §112, second paragraph rejection of claim 14. Further, Applicant respectfully submits that claim 14 was not rejected based on any of the applied or known references of record. Thus, Applicant respectfully submits that claim 14 contains allowable subject matter and Applicant submits claim 14 has been amended to overcome the rejection under 35 U.S.C. §112 and thus, is in condition for allowance.

Rejections Under 35 U.S.C. §103

Claims 2-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 6,486,864 issued to Nakajima, *et al.* (“Nakajima”) in view of U. S. Patent No. 5,784,039 issued to Yasui, *et al.* (“Yasui”). In view of page 3 of the Office Action, Applicant believes that claim 1 is also subject to the rejected recited above. Claims 4 and 6 have been cancelled by this Amendment, and thus, the rejection of claims 4 and 6 has been rendered moot. However, at least some of the subject matter recited in cancelled claims 4 and 6 has been incorporated into amended claims 1 and 5, respectively. Applicant respectfully traverses the rejection of claims 1-3, 5 and 7-13 for at least the following reasons.

Applicant respectfully submits that the combination of Nakajima and Yasui fails to disclose or suggest the combination of features recited in amended claims 1 and 5 including a gate driver sequentially applying a stepped-wave pattern gate voltage to a plurality of the gate lines, the stepped-wave pattern gate voltage including a first interval for converting a grayscale level of a first liquid crystal capacitor connected to a subsequent gate line through a first thin film transistor to a first grayscale level, a second interval for forming a path through which a data voltage of a second grayscale level is transmitted to a second liquid crystal capacitor connected to a present gate line through a second thin film transistor by turning on the second thin film

transistor, and a third interval following the second interval and having the same polarity as a polarity of the data voltage.

The paragraph abridging pages 3 and 4 of the Office Action states that Yasui teaches a third interval “t7-t8” for applying a voltage of the same polarity as the data voltage (V_s) during a predetermined interval before the first interval “t4-t6” and following the turning OFF of the thin film transistors. Applicant has incorporated the features of cancelled claims 4 and 6 into claims 1 and 5, respectively. Applicant respectfully submits that Figure 2 of Yasui illustrates a stepwise gate signal. For example, an upper right gate pulse has V_{x2} , which is lower than V_{GL} (the gate off voltage) during the first interval (t4-t6), V_g+V_{GL} (the gate-on voltage) during the second interval (t6-t7), and V_{GL} during a third interval (t7-). During the first interval, the source voltage V_s (corresponding to the data voltage) has a positive polarity with respect to the common voltage V_c , while the gate pulse has a negative polarity with respect to V_{GL} . Accordingly, Yasui does not overcome the deficiencies of Nakajima, as applied to amended claims 1 and 5.

Further, Applicant respectfully submits that Yasui does not disclose a storage capacitor connected between one of the liquid crystal capacitors and a previous gate line, as recited in amended claims 1 and 5. Accordingly, the voltage levels of the gate signal before and after a gate-on voltage for turning on a transistor have a different role in this invention than they do in Yasui. For at least these reasons, Applicant submits that the combination of Nakajima and Yasui fails to disclose or suggest all the features recited in amended independent claims 1 and 5.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-3, 5 and 7-13. Since the none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention,

Applicant respectfully submits that independent claims 1 and 5, and all the claims that depend therefrom are allowable.

CONCLUSION

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

Maryam M. Ipakchi

Maryam M. Ipakchi
Reg. No. 51,835

Hae-Chan Park
Reg. No. 50,114

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Attachments:

- Replacement Figures 4 and 5
- Transmittal Form
- Petition for an Extension of Time

McGuireWoods LLP
1750 Tysons Boulevard
Suite 1800
McLean, VA 22102-4215
Tel: 703-712-5365
Fax: 703-712-5280
HCP: SJH/bjb
\\COM227156.1